Biodiesel in Dragon Run: Roadmap to Preservation

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The views expressed are those of the author(s) and do not necessarily reflect the views of NOAA or any of its subagencies.

U.S. Department of Energy
Energy Efficiency and Renewable Energy

Clean Cities

Virginia Clean Cities & Hampton Roads Clean Cities Coalition

AMERICAN ENERGY FOR TRANSPORTATION

www.hrccc.org

Clean Cities

National US DoE voluntary program to promote energy independence in transportation

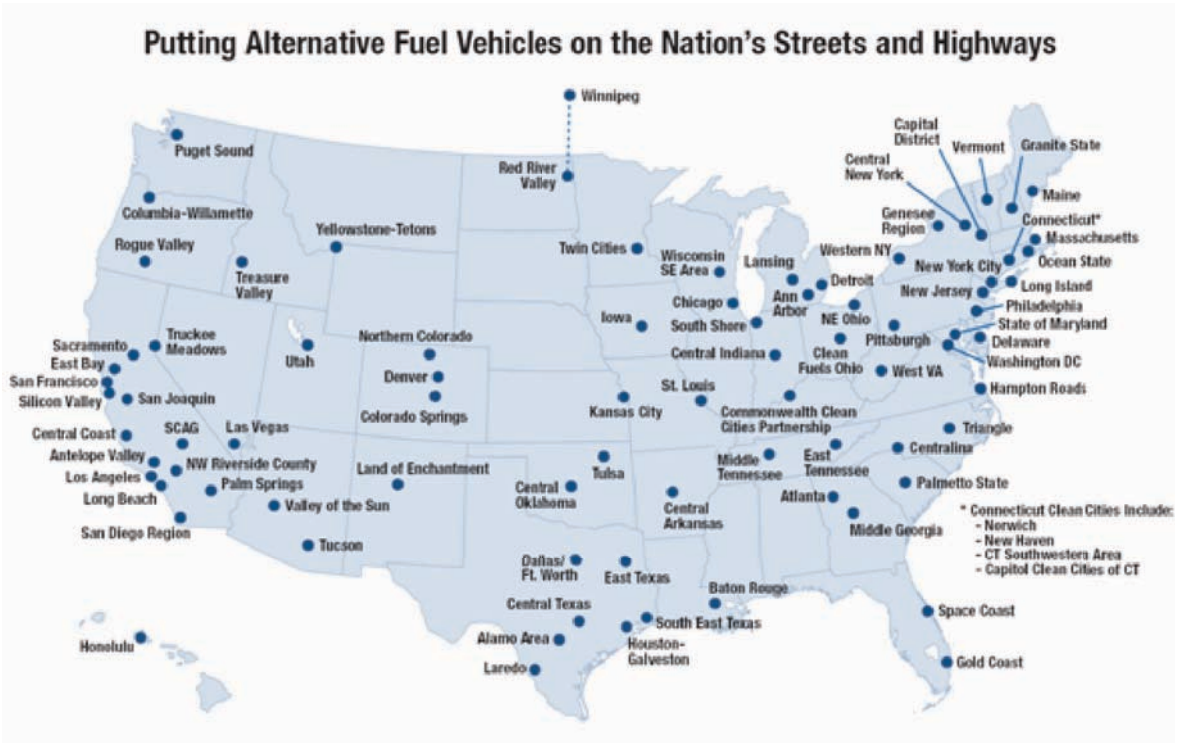
90 Coalitions nationwide

One designated Coalition in Virginia (Hampton Roads)

Statewide effort ongoing

Virginia Department of Mines Minerals and Energy

DoE Website:
http://www.eere.energy.gov/cleancities/
Virginia Clean Cities:
http://www.hrccc.org



Dragon Run: Why is it Worth Preserving?

- One of Chesapeake Bay watershed's most pristine waterways
- Encompasses extensive & unspoiled swamp forest and woodland communities
- Mainly undeveloped, almost entirely privately owned, encompasses 140 miles of rural landscape – mostly forests, farms, & wetlands
- Forestry & farming large economic drivers
- Plays a significant role in Middle Peninsula's culture and identity
- Name frequently borrowed by local enterprises & establishments
- 14 rare species & 5 rare natural communities are found in the watershed
- *Unique opportunity for proactively preserving the Dragon for future generations that safeguards both natural resources and traditional uses of the land & water, including the property rights of landowners*

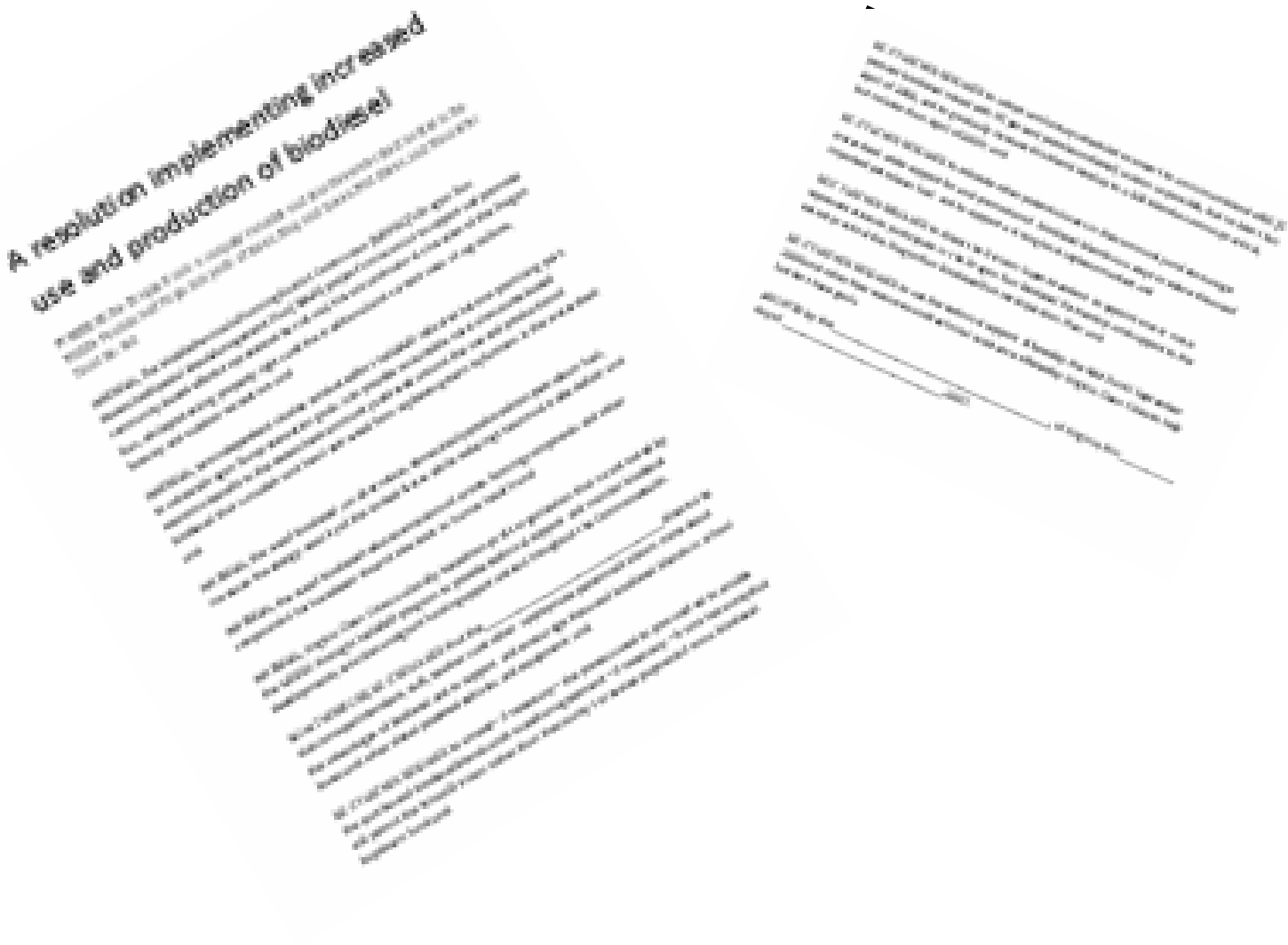
MPPDC & HRCCC

Dragon Run Watershed Special Area Management Plan (SAMP) – The purpose of a SAMP is to protect significant coastal resources when all levels of government are committed to a collaborative planning process to produce enforceable policies. The Dragon Run SAMP project's mission is to support and promote community-based efforts to preserve the cultural, historic and natural character of the Dragon Run, while preserving property rights and the traditional uses within the watershed.

Opportunities for Sustainable Natural Resource-Based Development in the Dragon Run Watershed ("Yellow Wood Study") – As part of the Dragon Run SAMP, the Yellow Wood study was conducted in October 2005 in order to identify and explore economic development activities and opportunities that sustain traditional land uses while enhancing the natural resource base or at least minimizing adverse impacts.

Biodiesel in Dragon Run: Roadmap to Preservation **–** HRCCC was contracted by the MPPDC to continue further exploration of biodiesel market viability and present recommendations based on survey summaries and stakeholder interest detailing potential to fulfill the goal to provide sustainable natural resource-based economic benefit to the watershed community centered around the use and production of

A resolution implementing increased use & production of biodiesel



Schools not asked to commit cash financial resources now or later, unless they decide to do so on voluntary basis

Partnership Agreement spells out in greater detail four save-the-Dragon prongs:

1. Clean School Bus USA grant program – exhaust treatment devices and biodiesel “buy-down” program
2. Private “buy-down” endowment to give other fleets same chance
3. Cost control by blend variation when subsidies are gone
4. Education and marketing to convince entire community to “save the dragon”

CSBUSA – Biodiesel Buy-down and emissions control devices (DOC)

A Middle Peninsula Clean School Bus grant proposal has been selected by EPA for funding. The proposal includes a cost-equalization fund to encourage school districts to use biodiesel blends to reduce diesel exhaust emissions from school buses. The grant budget includes a maximum of $20,000 to "buy down" the differential cost of biodiesel (up to $0.01 per percent of biodiesel in the blend) so that a school district can elect to use blends of the cleaner, domestically produced alternative fuel in school buses without paying a premium over the cost of petroleum diesel.

Will move slowly on biodiesel to make sure all comfortable and well educated about protocol, know use low blends in cold weather, etc.

Private Endowment
To give other fleets same chance

The Middle Peninsula Planning District Commission has contracted with Hampton Roads Clean Cities Coalition to develop a proposal to create a similar buy-down program to extend the biodiesel cost-equalization opportunity to other users of diesel, including additional government agencies, commercial fleet operators with central fueling, such as farmers and other small businesses, and private vehicle owners who purchase fuel from retail stations. A USDA no-interest loan and private donations are some of the intended sources of funds for this initiative, which will function like an endowment or trust fund.

Cost Control

By blend variation when subsidies are gone

Price calculator for biodiesel blends				
	B2	B5	B10	B20
gallons:	100	100	100	100
petro gals:	98	95	90	80
bio gals:	2	5	10	20
petro price:	2.000	2.000	2.000	2.000
petro total:	196.00	190.00	180.00	160.00
bio price:	2.300	2.300	2.300	2.300
bio total:	4.60	11.50	23.00	46.00
total cost	200.60	201.50	203.00	206.00
avg price gal:	2.006	2.015	2.030	2.060
fed tax	0.244	0.244	0.244	0.244
va tax	0.160	0.160	0.160	0.160
total with tax	2.410	2.419	2.434	2.464

enter cost of petroleum diesel:	$ 2.00
enter cost of B100 used to blend:	$ 2.30
differential cost of B2 in example:	$0.006
differential cost of B5 in example:	$0.015
differential cost of B10 in example:	$0.030
differential cost of B20 in example:	$0.060

The differential cost of biodiesel blends compared to petroleum can be managed by adjusting the blend level up or down

Education and marketing to convince entire community to “Save the Dragon”

In order for biodiesel to have a significant, lasting and favorable impact on preservation of the Dragon Run, support for the use of biodiesel will have to extend throughout the supply chain from producer to end users, and across the spectrum of users from large government fleets to single private cars and trucks.

Existing & Potential Partners

Fuel distributors
Biodiesel refinery
MPPDC
HRCCC
VA DEQ
EPA
News media
Farmers
DRSC
Private fleets (i.e. Bay Transit)
Fuel retailers, others?)

Solutions?


Virginia Biodiesel
Environmental Compliance Primer
October 2007
DRAFT
Virginia Department of Environmental Quality
Clean Cities
VIRGINIA
Virginia Clean Cities
DMME
Virginia Department of Mines Minerals and Energy
Virginia Department of Mines, Minerals, and Energy

Solutions?

Trading Nutrient Reductions from Nonpoint Source Best Management Practices in the Chesapeake Bay Watershed:
Guidance for Agricultural Landowners and Your Potential Trading Partners

Preliminary 2nd Draft
October 10, 2007

INTRODUCTION

In January 2005, the Commonwealth of Virginia issued the Chesapeake Bay (the Bay) Nutrient and Sediment Reduction Tributary Strategy. The Strategy defines the reductions in nutrients and sediment necessary in Virginia's portion of the Bay to achieve and maintain the water quality necessary to support the Bay's aquatic living resources and to protect human health. Achieving these water quality goals requires point and nonpoint sources in Virginia to reduce phosphorus and nitrogen in Virginia's Chesapeake Bay watersheds or basins. Wastewater treatment plants and industrial facilities are point sources of nutrients and nonpoint sources include runoff from agricultural and urban land uses.

Legislation passed in 2005 created the Chesapeake Bay Watershed Nutrient Credit Exchange Program, and provides Virginia's point and nonpoint sources located in the

Solutions?

Virginia's
Rural Economic Analysis Program

HORIZONS

March/April 2007 Volume 19 Number 2

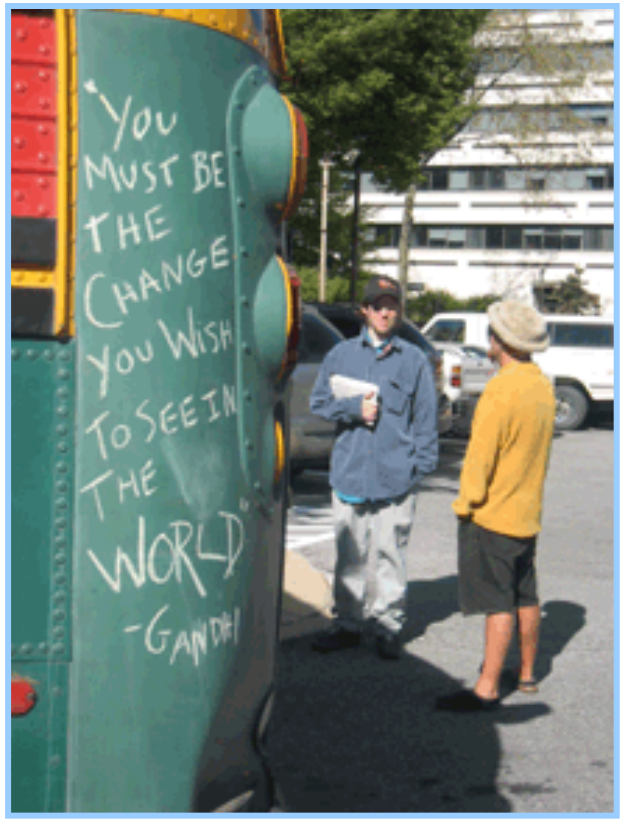
Ethanol and Water Quality in the Mid-Atlantic Region

Jim Pease

Ethanol (ethyl alcohol) is a flammable colorless liquid compound that has about 70 percent of the energy of an equivalent amount of gasoline. It is also the "green" liquid fuel of choice in the U.S. economy. During his recent trip to South America, President Bush stated that greater ethanol use would diversify energy supplies, create jobs, and clean up the environment (*Washington Post*, March 9, 2007). The drive for more energy independence has resonated across

Clean Cities Virginia

Middle Peninsula Planning District Commission



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